

meetings that the meeting insight computing system was not used to manage or schedule—e.g., meetings that were scheduled using a different medium, or impromptu meetings that were not scheduled at all. For instance, the meeting insight computing system may begin tracking meeting quality parameters any time it detects that a space typically used for meetings is occupied by one or more people during business hours.

**[0025]** Meeting quality parameters may be sorted or organized in any suitable way. In some examples, the meeting insight computing system may maintain a list of historical meetings, the participants, time, and location for each of the historical meetings, and a set of quality parameters for each of the historical meetings. Thus, the meeting quality parameters maintained by the meeting evaluation machine may be searchable or filterable, such that it is possible to view quality parameters associated with all meetings that took place at a particular location (e.g., room, building, campus, region), a particular time (e.g., time-of-day, day-of-week, season, year), meetings that had a specific number of participants, meeting that specific participants attended, etc.

**[0026]** The meeting evaluation machine retrieves quality parameters **308** from a plurality of meeting quality monitoring devices **310** (e.g., quality monitoring devices **106A-106D** of FIG. 1). In some cases, meeting quality monitoring devices **310** may be accessed over a network **312**, such as the Internet. Nonlimiting examples of meeting quality monitoring devices include: temperature sensors, air composition sensors, motion sensors, brightness sensors, cameras (e.g., visible light or infrared), microphones, pressure sensors (e.g., embedded in a floor, table, or chairs), network communication interfaces (e.g., used to detect device presence via WiFi or Bluetooth), personal devices (e.g., usage history, current location), local or remote databases/services (e.g., communications activity, employee records), etc.

**[0027]** Returning briefly to FIG. 2, at **204**, method **200** includes receiving an input to schedule an upcoming meeting at a user-designated meeting time, in a meeting location, and with one or more meeting participants. In some examples, the input may include additional or alternative information when scheduling the meeting, for instance including a meeting topic, meeting agenda, history of past meetings, special meeting requirements (e.g., required AV equipment, wheelchair accessibility, time zone restrictions), etc. Such an input may be provided to a graphical scheduling interface of a meeting insight computing system, at which point it may be correlated with similar meetings that took place in the past. Furthermore, more granular or detailed information may be derived based on the user input to improve the ability of the system to predict the quality of the upcoming meeting. For example, based on the specified meeting location, the meeting insight computing system may determine how large the meeting location is, whether it has windows or other sources of light, how close it is to the invited meeting participants, typical temperature/air composition of the meeting space, whether AV equipment is present, etc.

**[0028]** FIG. 3 schematically shows an example graphical scheduling interface **304** of the meeting insight computing system **300**, which generates a user interface useable by users of the meeting insight computing system to create and manage meetings. The specific layout of the user interface

may vary from implementation to implementation. An example user interface will be described below with respect to FIG. 4.

**[0029]** In general, meetings scheduled via the scheduling interface will occur at a specified time **314** and location **316** and include specific meeting participants **318**. In some cases, a meeting topic **320** may be specified. The scheduling interface may be configured to track all meetings that the meeting insight computing device is used to schedule and maintain. Thus, if a user attempts to schedule a meeting that conflicts with another meeting (e.g., because the meeting is at the same time and location as another meeting, or an invited participant has already committed to attend a different meeting at the same time), then the scheduling interface may notify the user of the conflict. Furthermore, once a meeting has been created, the scheduling interface may automatically send invitations to the invited participants and reserve the meeting location at the designated meeting time.

**[0030]** Returning again to FIG. 2, at **206**, method **200** includes reporting a meeting insight generated based on the meeting time, the meeting location, the one or more meeting participants, and the plurality of quality parameters. Additional or alternative information may in some examples serve as the basis for the meeting insight, such as, for example, a topic of the meeting. The meeting insight includes a recommendation to change one or more of the meeting time, meeting location, and meeting participants to improve a quality score of the upcoming meeting. The meeting insight may be reported in any suitable way, including via the graphical scheduling interface at the time the meeting is scheduled.

**[0031]** Returning to FIG. 3, insight generation machine **306** of meeting insight computing system **300** is configured to generate meeting insights **322** based on the meeting quality parameters maintained by the meeting evaluation machine. Such insights can include valuable information regarding overall meeting quality, whether recurring or ongoing meetings are useful/productive, whether upcoming meetings are likely to be worthwhile, etc.

**[0032]** In some examples, meeting insights may be generated each time a user schedules a new meeting via the scheduling interface. In such examples, each meeting insight includes a meeting recommendation that is predicted to improve a quality score of the newly-created meeting. As indicated above, a quality score may take any suitable form and may be calculated in any suitable way. In one example, the quality score of a meeting may be based on a meeting productivity metric, a participant emotional sentiment metric, and an environmental comfort metric. These metrics may in turn be calculated in any suitable way, and in some cases may be derived from the plurality of quality parameters. In other words, each of the quality parameters maintained by the meeting evaluation machine may have an impact on an overall “quality score” of the quality parameter’s associated meeting. A meeting in which the air temperature is at a comfortable value (e.g., between 68 and 72 degrees Fahrenheit) may have a relatively higher quality score than meetings in which the air temperature is excessively high or low. Other quality parameters (e.g., air quality, meeting attendance, estimated fatigue level) may have similar effects on the overall meeting quality score.

**[0033]** In some examples, each meeting may start with a default maximum quality score, and any negative quality parameters (e.g., room is too hot or too noisy) may deduct